



SEQUENCE LISTING

#7

<110> Ribozyme Pharmaceuticals, Inc
Usman, Nassim
McSwiggen, Jim
Zinnen, Shawn
Seiwert, Scott
Haeberli, Pete
Chowrira, Bharat
Blatt, Larry
Vaish, Narendra

<120> A Process for the Detection of Nucleic Acid Using Nucleic Acid Catalysts

<130> MBHB00-816-C (700/002)

<140> 09/877,526

<141> 2001-03-06

<150> 60/187,128

<151> 2000-03-06

<160> 49

<170> PatentIn version 3.0

<210> 1

<211> 15

<212> RNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic reporter sequence

<400> 1

aagcacuaau ggaga

15

<210> 2

<211> 15

<212> RNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic reporter sequence

<400> 2

aagcacuaac aguaa

15

<210> 3

<211> 37

<212> RNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic sensor sequence

<400> 3
ucuccaucug augaggccgu uaggccgaaa gugcuug 37

<210> 4
<211> 43
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic sensor sequence

<400> 4
ucuccaucug augaggccgu uaggccgaaa gugcuugcga gug 43

<210> 5
<211> 43
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic sensor sequence

<400> 5
uuacugucug augaggccgu uaggccgaaa gugcuugcga gug 43

<210> 6
<211> 25
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic sensor component
sequence

<220>
<221> misc_feature
<222> (1)..(25)
<223> 2'-O-Methyl

<400> 6
caagcacuuu cucaucagau ggaga 25

<210> 7
<211> 31
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic sensor component
sequence

<220>

<221> misc_feature
 <222> (1)..(31)
 <223> 2'-O-Methyl

 <400> 7 31
 cacucgcaag cacuuucuca ucagauggag a

 <210> 8
 <211> 26
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic sensor component
 sequence

 <220>
 <221> misc_feature
 <222> (1)..(26)
 <223> 2'-O-Methyl

 <400> 8 26
 cacucgcaag caccuaucag gcagua

 <210> 9
 <211> 28
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic sensor component
 sequence

 <220>
 <221> misc_feature
 <222> (1)..(28)
 <223> 2'-O-Methyl

 <400> 9 28
 cacucgcaag cacccuauca gguggaga

 <210> 10
 <211> 27
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic target signaling
 sequence

 <400> 10 27
 uacugccuga uagggugcuu gcgagug

<210> 11
<211> 15
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Generic target sequence

<220>
<221> misc_feature
<222> (1)..(6)
<223> n stands for any nucleotide

<220>
<221> misc_feature
<222> (9)..(15)
<223> n stands for any nucleotide

<400> 11
nnnnnnnuhnn nnnnn

15

<210> 12
<211> 36
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Enzymatic Nucleic Acid

<220>
<221> misc_feature
<222> (1)..(7)
<223> n stands for any nucleotide

<220>
<221> misc_feature
<222> (16)..(18)
<223> n stands for any nucleotide

<220>
<221> misc_feature
<222> (23)..(25)
<223> n stands for any nucleotide

<220>
<221> misc_feature
<222> (31)..(36)
<223> n stands for any nucleotide

<220>
<221> misc_feature
<222> (1)..(8)
<223> 2'-O-Methyl

<220>
<221> misc_feature

<222> (12)..(12)
<223> 2'-O-Methyl

<220>
<221> misc_feature
<222> (14)..(26)
<223> 2'-O-Methyl

<220>
<221> misc_feature
<222> (28)..(29)
<223> 2'-O-Methyl

<220>
<221> misc_feature
<222> (31)..(36)
<223> 2'-O-Methyl

<220>
<221> misc_feature
<222> (9)..(9)
<223> 2'-deoxy-2'-C-Allyl

<400> 12
nnnnnnncug augagnnga aannncgaaa nnnnnn

36

<210> 13
<211> 14
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Generic target sequence

<220>
<221> misc_feature
<222> (1)..(5)
<223> n stands for any nucleotide

<220>
<221> misc_feature
<222> (8)..(14)
<223> n stands for any nucleotide

<400> 13
nnnnnchnnn nnnn

14

<210> 14
<211> 35
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Enzymatic Nucleic Acid

```

<220>
<221> misc_feature
<222> (1)..(7)
<223> n stands for any nucleotide

<220>
<221> misc_feature
<222> (16)..(18)
<223> n stands for any nucleotide

<220>
<221> misc_feature
<222> (23)..(25)
<223> n stands for any nucleotide

<220>
<221> misc_feature
<222> (31)..(35)
<223> n stands for any nucleotide

<220>
<221> misc_feature
<222> (1)..(8)
<223> 2'-O-Methyl

<220>
<221> misc_feature
<222> (12)..(12)
<223> 2'-O-Methyl

<220>
<221> misc_feature
<222> (14)..(26)
<223> 2'-O-Methyl

<220>
<221> misc_feature
<222> (28)..(29)
<223> 2'-O-Methyl

<220>
<221> misc_feature
<222> (31)..(35)
<223> 2'-O-Methyl

<220>
<221> misc_feature
<222> (30)..(30)
<223> n stands for Inosine

<220>
<221> misc_feature
<222> (9)..(9)
<223> 2'-deoxy-2'-C-Allyl

<400> 14
nnnnnnncug augagnnga aannncgaan nnnnn

```

<210> 15
<211> 15
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Generic target sequence

<220>
<221> misc_feature
<222> (1)..(6)
<223> n stands for any nucleotide

<220>
<221> misc_feature
<222> (9)..(15)
<223> n stands for any nucleotide

<400> 15
nnnnnnnyggn nnnnn

15

<210> 16
<211> 35
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Enzymatic Nucleic Acid Motif

<220>
<221> misc_feature
<222> (1)..(7)
<223> n stands for any nucleotide

<220>
<221> misc_feature
<222> (29)..(35)
<223> n stands for any nucleotide

<220>
<221> misc_feature
<222> (1)..(8)
<223> 2'-O-Methyl

<220>
<221> misc_feature
<222> (13)..(16)
<223> 2'-O-Methyl

<220>
<221> misc_feature
<222> (18)..(35)
<223> 2'-O-Methyl

<220>
 <221> misc_feature
 <222> (11)..(11)
 <223> Phosphorothioate 3'-Internucleotide Linkage

<400> 16
 nnnnnnnnuga uggcaugcac uaugcgcgnn nnnnn

35

<210> 17
 <211> 48
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid Motif

<220>
 <221> misc_feature
 <222> (1)..(8)
 <223> 2'-O-Methyl

<220>
 <221> misc_feature
 <222> (12)..(21)
 <223> 2'-O-Methyl

<220>
 <221> misc_feature
 <222> (32)..(37)
 <223> 2'-O-Methyl

<220>
 <221> misc_feature
 <222> (44)..(48)
 <223> 2'-O-Methyl

<220>
 <221> misc_feature
 <222> (9)..(10)
 <223> 2'-deoxy-2'-amino

<220>
 <221> misc_feature
 <222> (22)..(26)
 <223> 2'-deoxy-2'-amino

<220>
 <221> misc_feature
 <222> (38)..(40)
 <223> 2'-deoxy-2'-amino

<400> 17
 gugugcaacc ggaggaaacu cccuucagg acgaaagucc gggacggg

48

<210> 18

<211> 16
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Target sequence for SEQ ID NO 17

<400> 18
gccguggguu gcacac 16

<210> 19
<211> 36
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Enzymatic Nucleic Acid Motif

<220>
<221> misc_feature
<222> (1)..(7)
<223> 2'-O-Methyl

<220>
<221> misc_feature
<222> (36)..(36)
<223> 3'-3' inverted abasic moiety

<220>
<221> misc_feature
<222> (9)..(15)
<223> 2'-O-Methyl

<220>
<221> misc_feature
<222> (19)..(19)
<223> 2'-O-Methyl

<220>
<221> misc_feature
<222> (21)..(21)
<223> 2'-O-Methyl

<220>
<221> misc_feature
<222> (23)..(23)
<223> 2'-O-Methyl

<220>
<221> misc_feature
<222> (26)..(26)
<223> 2'-O-Methyl

<220>
<221> misc_feature
<222> (28)..(35)

<223> 2'-O-Methyl
 <220>
 <221> misc_feature
 <222> (1)..(4)
 <223> Phosphorothioate 3'-Internucleotide Linkage
 <220>
 <221> misc_feature
 <222> (17)..(17)
 <223> 2'-Deoxy-2'-Amino
 <220>
 <221> misc_feature
 <222> (27)..(27)
 <223> 2'-Deoxy-2'-Amino
 <400> 19 36
 gugccuggcc gaaaggcgag ugaggucugc cgcgcn
 <210> 20
 <211> 15
 <212> RNA
 <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence: Target sequence for SEQ ID NO 19
 <400> 20 15
 gcgcggcgca ggcac
 <210> 21
 <211> 16
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid Motif
 <400> 21 16
 rggctagcta caacga
 <210> 22
 <211> 12
 <212> RNA
 <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence: Generic Reporter Molecule
 <220>
 <221> misc_feature
 <222> (1)..(5)
 <223> n stands for any nucleotide

<220>
 <221> misc_feature
 <222> (8)..(12)
 <223> n stands for any nucleotide

<400> 22
 nnnnnnygnnn nn

12

<210> 23
 <211> 35
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic Sensor Molecule Motif

<220>
 <221> misc_feature
 <222> (1)..(6)
 <223> n stands for any nucleotide

<220>
 <221> misc_feature
 <222> (8)..(17)
 <223> n stands for any nucleotide

<220>
 <221> misc_feature
 <222> (31)..(35)
 <223> n stands for any nucleotide

<400> 23
 nnnnnngnnn nnnnnnnncga gugaggucur nnnnn

35

<210> 24
 <211> 23
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic Sensor Molecule Motif

<220>
 <221> misc_feature
 <222> (1)..(5)
 <223> n stands for any nucleotide

<220>
 <221> misc_feature
 <222> (19)..(23)
 <223> n stands for any nucleotide

<400> 24
 nnnnnncgagu gaggucurnn nnn

23

<210> 25
<211> 11
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Target Signaling
Molecule

<220>
<221> misc_feature
<222> (1)..(4)
<223> n stands for any nucleotide

<220>
<221> misc_feature
<222> (7)..(11)
<223> n stands for any nucleotide

<400> 25
nnnnrgnnnn n 11

<210> 26
<211> 21
<212> RNA
<213> Hepatitis C virus

<400> 26
gguccuuucu uggauaaacc c 21

<210> 27
<211> 42
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Sensor/Reporter Molecule

<220>
<221> misc_feature
<222> (22)..(35)
<223> n stands for any nucleotide

<400> 27
ggguuuaucg agugaggucu rnnnnnnnnnn nnnnnygcaa ga 42

<210> 28
<211> 54
<212> RNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Sensor Molecule

<220>

<221> misc_feature

<222> (1)..(6)

<223> n stands for any nucleotide

<220>

<221> misc_feature

<222> (50)..(54)

<223> n stands for any nucleotide

<400> 28

nnnnnnngagc cgaguagcgu ugggucgcga aaggcucgag ugaggucurn nnnn

54

<210> 29

<211> 72

<212> RNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Sensor Molecule

<220>

<221> misc_feature

<222> (1)..(6)

<223> n stands for any nucleotide

<220>

<221> misc_feature

<222> (8)..(16)

<223> n stands for any nucleotide

<220>

<221> misc_feature

<222> (46)..(54)

<223> n stands for any nucleotide

<220>

<221> misc_feature

<222> (68)..(72)

<223> n stands for any nucleotide

<400> 29

nnnnnnngnnn nnnnnnagcc gaguagcguu gggucgcgaa aggcunnnnn nnnncgagug

60

aggucurnnn nn

72

<210> 30

<211> 39

<212> RNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic Sensor Molecule

<220>
<221> misc_feature
<222> (1)..(6)
<223> n stands for any nucleotide

<220>
<221> misc_feature
<222> (8)..(17)
<223> n stands for any nucleotide

<220>
<221> misc_feature
<222> (31)..(39)
<223> n stands for any nucleotide

<400> 30
nnnnnnngnnn nnnnnnnncca gugaggucur nnnnnnnnnn

39

<210> 31
<211> 10
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Generic Target Molecule

<220>
<221> misc_feature
<222> (1)..(6)
<223> n stands for any nucleotide

<220>
<221> misc_feature
<222> (8)..(10)
<223> n stands for any nucleotide

<400> 31
nnnnnnngnnn

10

<210> 32
<211> 39
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Reporter/Sensor Molecule

<220>
<221> misc_feature
<222> (1)..(5)
<223> n stands for any nucleotide

<220>
<221> misc_feature

<222> (19)..(32)
 <223> n stands for any nucleotide

 <220>
 <221> misc_feature
 <222> (35)..(39)
 <223> n stands for any nucleotide

 <400> 32
 nnnnncgagu gaggucurnn nnnnnnnnnn nnygnnnnn 39

 <210> 33
 <211> 34
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic Reporter/Sensor Molecule

 <220>
 <221> misc_feature
 <222> (1)..(5)
 <223> n stands for any nucleotide

 <220>
 <221> misc_feature
 <222> (19)..(32)
 <223> n stands for any nucleotide

 <400> 33
 nnnnncgagu gaggucurnn nnnnnnnnnn nnyg 34

 <210> 34
 <211> 27
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Target Molecule

 <400> 34
 cgguccuuu cuuggauaaa cccgcuc 27

 <210> 35
 <211> 47
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic Sensor Molecule

 <220>
 <221> misc_feature
 <222> (37)..(38)

<223> 2'-O-Methyl

<400> 35
gagcggguuu auccaagaaa ggaccuuuuc gagugagguc ugacggc 47

<210> 36
<211> 12
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Reporter Molecule

<400> 36
gccgucguug ga 12

<210> 37
<211> 21
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Target Sequence

<400> 37
gguccuuucu uggauaaacc c 21

<210> 38
<211> 12
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Reporter Molecule

<400> 38
gccgucguua uu 12

<210> 39
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic Sensor Molecule

<400> 39
gggcttatcc aagaaaggac c 21

<210> 40
<211> 37
<212> RNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Erk Modulated Sensor Molecule

<400> 40

gcgugaccug augaggccga aaggccgaaa cguuccc

37

<210> 41

<211> 41

<212> RNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Erk Modulated Sensor Component

<400> 41

ggauaaggag gauuuccgaa agcgguacg guccgccauc c

41

<210> 42

<211> 74

<212> RNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Erk Modulated Sensor Molecule

<400> 42

gcgugaccug augagucacg cuaaggagga uuuccgaaag cggcuacggu ccgccagugu

60

uacgaaacgu uccc

74

<210> 43

<211> 38

<212> RNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Half-Zinzyme

<220>

<221> misc_feature

<222> (1)..(4)

<223> 2'-O-Methyl

<220>

<221> misc_feature

<222> (6)..(11)

<223> 2'-O-Methyl

<220>

<221> misc_feature

<222> (14)..(14)

<223> 2'-O-Methyl

<220>
 <221> misc_feature
 <222> (16)..(27)
 <223> 2'-O-Methyl

 <220>
 <221> misc_feature
 <222> (31)..(38)
 <223> 2'-O-Methyl

 <400> 43 38
 uuaucgagug aggcugacg gcgccgucgc aagaaagg

 <210> 44
 <211> 17
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Target Signaling Molecule

 <400> 44 17
 gguccuuucu uggauaa

 <210> 45
 <211> 17
 <212> RNA
 <213> Hepatitis C virus

 <400> 45 17
 ccuuucuugg auaaaug

 <210> 46
 <211> 112
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Sensor Ligase Molecule

 <400> 46 60
 aaaccagucg gaacacuaua cgacugguac cguaaaagac aaugugccc ucagagcaag
 gaccgaucuu cggauccagg ggaggcaccc cccgguggcu uuaacgccaa cg 112

 <210> 47
 <211> 17
 <212> RNA
 <213> Hepatitis C virus

 <400> 47

gguccuuucu uggauaa

17

<210> 48
<211> 366
<212> RNA
<213> Hepatitis C virus

<400> 48
gccagcccc gauugggggc gacacuccac cauagauac uccccuguga ggaacuacug 60
ucuucacgca gaaagcgucu agccauggcg uuaguaugag ugucgugcag ccuccaggac 120
ccccccuccc gggagagcca uaguggucug cggaaccggu gaguacaccg gaauugccag 180
gacgaccggg uccuuucuug gaucaaccg cucaaugccu ggagauuug gcgugcccc 240
gcgagacugc uagccgagua guguggguc gcgaaaggcc uugugguacu gccugauagg 300
gugcuugcga gugccccggg aggucucgua gaccgugcac caugagcacg aauccuaaac 360
cucaaa 366

<210> 49
<211> 12
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Generic Target Sequence

<220>
<221> misc_feature
<222> (1)..(5)
<223> n stands for any nucleotide

<220>
<221> misc_feature
<222> (9)..(12)
<223> n stands for any nucleotide

<400> 49
nnnnnygynn nn

12